

MFJ

Inductance/Capacitance Meter

Model MFJ-200A



INSTRUCTION MANUAL

CAUTION: Read All Instructions Before Operating Equipment

MFJ ENTERPRISES, INC.

300 Industrial Park Road
Starkville, MS 39759 USA
Tel: 662-323-5869 Fax: 662-323-6551

INTRODUCTION

Congratulations on purchasing the MFJ-200A Inductance/Capacitance Meter. The Inductance/Capacitance Meter is highly accurate, compact, rugged, self calibrating, and super easy-to-use! The MFJ-200A delivers laboratory performance. The sophisticated high-speed micro-controller allows it to compute unknown capacitance/inductance in seconds. Here are some important features we think you'll like:

Multiple Ranges: Four selectable ranges:

- 0.01pF - 10uF
- 1uF - 100uF
- 0.001uH - 100mH
- .001mH - 100H.

Computation: High speed Microcontroller precision computation.

Power: Use four AA batteries (not included), 5.5mm DC AC adapter, or any USB source with a mini-USB plug.

Sleep Mode: Intellectually shutdown in 5 min. Just push power switch to resume testing.

Important Warnings:

Do not reset to "0" as components are being measured. If you do it, please shut down immediately and restart, then reset to "0".

Do not to measure a capacitance which is not discharged, otherwise it may damage the mainframe.

MFJ-200A CONTROLS

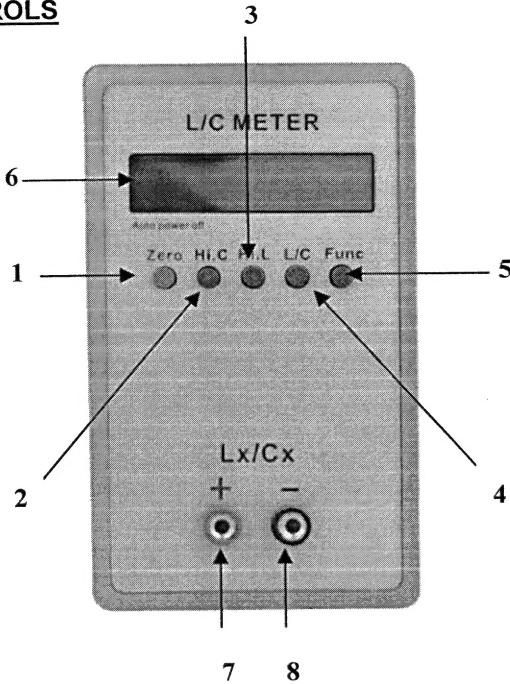


Figure 1 MFJ-200A INDUCTANCE/CAPACITANCE METER

Front Panel Controls and Indicators

- Push button Zero switch (1) allows the user to reset to zero.
- Push button Hi.C switch (2) allows the user to calculate capacitance ranges.
 - Button pushed out calculate capacitance ranges 1uF-100mF
 - Button pushed in calculate capacitance ranges .01pF-10uF
- Push button Hi.L switch (3) allows the user to calculate inductance ranges.
 - Button pushed out calculate inductance ranges 100mH-100H
 - Button pushed in calculate inductance ranges .001-100mH
- Push button L/C switch (4) allows the user to select inductance or capacitance.
 - Button pushed out capacitance C
 - Button pushed in inductor L
- Push button Func switch (5) allows the user to see results in Hz.
 - Button pushed reads results inHz

- Button released reads results
- LCD Display (6) A 2-Line by 16-character alphanumeric display. Displays measured results for capacitance and Induction.
- Test Leads
 - Positive (7)
 - Negative (8)
- Power Supply
 - On/Off Switch (9)
 - Up position is on.
 - Down position is off.
 - Mini USB Interface (10)
 - 5.5mm DC socket (11)
 - 4 AA batteries (12) (not included)

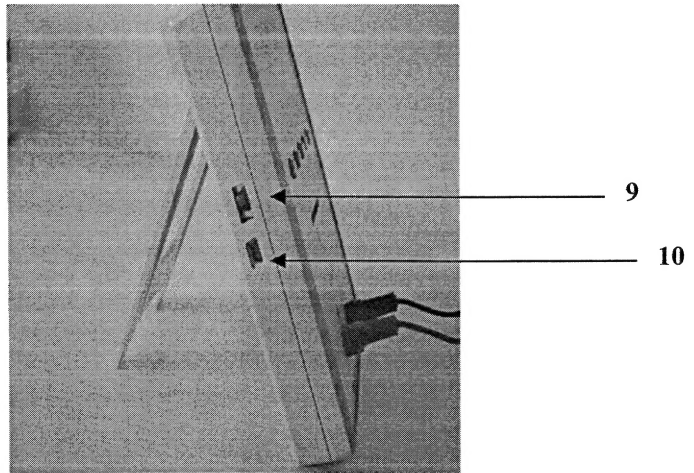


Figure 2 MFJ-200A INDUCTANCE/CAPACITANCE METER
Left Side Panel

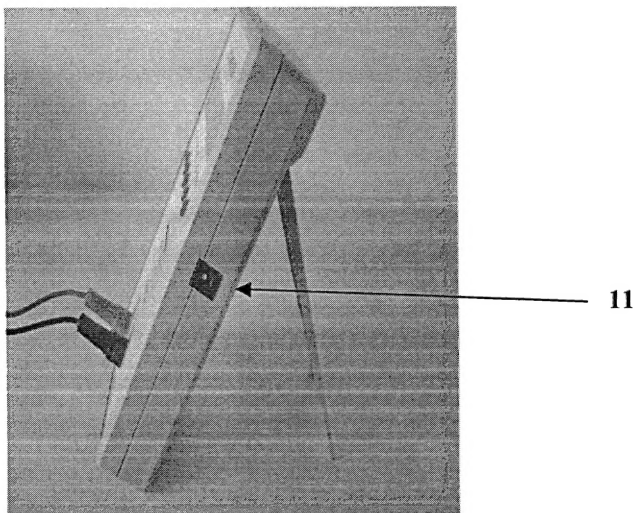


Figure 3 MFJ-200A INDUCTANCE/CAPACITANCE METER
Right Side Panel

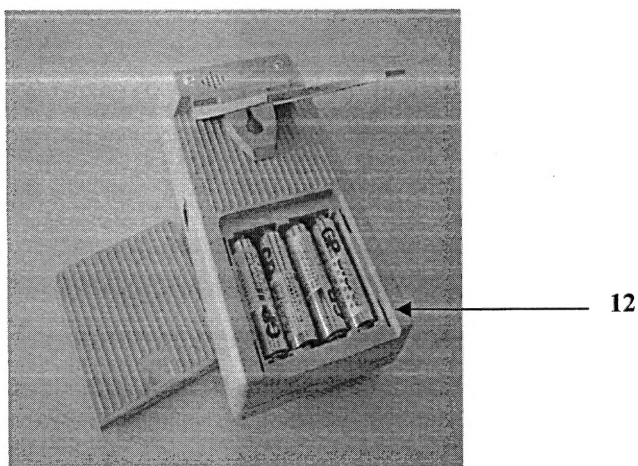


Figure 4 MFJ-200A INDUCTANCE/CAPACITANCE METER
Back Side Panel

(In "1", Out "0", "X" random)

Hi.C	Hi.L	L/C	Corresponding Function
0	0	0	Hi.C button in
0	0	1	Hi.L button in
0	1	1	Hi.L button up
0	1	0	Error, Please Modify
0	X	X	Hi.C button up

MFJ-200A Function table

DIRECTIONS FOR USE

1. Switch on the L/C Meter.

- Move switch on left side panel to the up position.

2. Select Corresponding Range. The following displays will appear until load is present.

- L/C Button in L, LCD screen will display OVER RANGE
- L/C Button out C, LCD screen will display .00pF
- Hi.L Button in LCD screen will display OVER RANGE
- Hi.C Button in LCD screen will display .00uF

When testing lead open loop in capacitance or Inductance and MFJ-200A does not measure "0" when testing lead short circuit. Rest to "0" by way of capacitance model or inductance model.

Capacitance model:

- Press Zero button as testing lead open loop, it displays "CALCULATING...", keep pressing for one second, when "CALCULATING...OK" displayed, resetting to "0" is finished, and "0.00pF" is displayed, then capacitances can be measured.

Inductance model:

- Press Zero button as testing lead short circuit, it displays "0.000uH" or "0.000mH", and then inductances can be measured.

4.Connect your component.

- Positive terminal to Positive component lead, Negative terminal to Negative component lead
- Results will displayed on LCD screen

- Press Func button ,corresponding frequency will be displayed.

Result appears instantly on the easy-to-read LCD with 4-digit numerical resolution.

SPECIFICATIONS

(Hi.C) Button (in) Accuracy

- 5% Range (.01pF-.1pF), 1% Range (1pF- uF), 5% Range (1uF-10uF).
- Minimum Capacitance Resolution (C Range) .01pF

(Hi.C) Button (out) Accuracy

- 5% Range (1uF-100mF)
- Minimum Big Capacitance Resolution .01uF

(Hi.L) Button (in) Accuracy

- 5% Range (.001uH-.1uH), 1% Range (1uH-100mH).
- Minimum Inductance Resolution (L Range) is .001uH

(Hi.L) Button (out) Accuracy

- 1% Range (100mH-1H), 5% Range (1H-100H)
- Minimum Big Inductance Resolution .001Mh

Power

- 5.5 DC Socket on right side
- Mini USB plug on left side
- AC / DC Switch on left side
- 4 AA Batteries (not included)

Range: *Four measuring positions*

- 1. C range** Capacitance (0.01pF-10uF)
- 2. L range** Inductance (0.001uH-100mH)
- 3. Hi.L range** Big Inductance (0.01pF-10uF)
- 4. Hi.C range** Big Capacitance (0.01pF-10uF)

All ranges are automatic measuring ranges

Note:

1. Please reset to “0” before testing a capacitance or an inductance, or errors may be appeared. Even if “0” displayed before measuring, resetting to “0” is needed.
2. At the time of resetting to “0”, when “CALCULATING...OK” appeared, please keep pressing for 2 to 3 seconds, and the parameter written to “” will be prompted, then release.
3. The time of measuring a big capacitance (above 10mF) may be more than one second, and it needs seven to eight seconds to get the measured value of the capacitance (100mF).

LIMITED 12 MONTH WARRANTY

MFJ Enterprises, Inc. warrants to the original owner of this product, if manufactured by MFJ Enterprises, Inc. and purchased from an authorized dealer or directly from MFJ Enterprises, Inc. to be free from defects in material and workmanship for a period of 12 months from date of purchase provided the following terms of this warranty are satisfied:

1. The purchaser must retain the dated proof-of-purchase (bill of sale, canceled check, credit card or money order receipt, etc.) describing the product to establish the validity of the warranty claim and submit the original or machine reproduction of such proof of purchase to MFJ Enterprises, Inc. at the time of warranty service. MFJ Enterprises, Inc. shall have the discretion to deny warranty without dated proof-of-purchase. Any evidence of alteration, erasure, or forgery shall be cause to void any and all warranty terms immediately.
2. MFJ Enterprises, Inc. agrees to repair or replace at MFJ's option without charge to the original owner any defective product under warrantee provided the product is returned postage prepaid to MFJ Enterprises, Inc. with a personal check, cashiers check, or money order for \$7.00 covering postage and handling.
3. This warranty is NOT void for owners who attempt to repair defective units. Technical consultation is available by calling the Service Department at 662-323-0549 or the MFJ Factory at 662-323-5869.
4. This warranty does not apply to kits sold by or manufactured by MFJ Enterprises, Inc.
5. Wired and tested PC board products are covered by this warranty provided only the wired and tested PC board product is returned. Wired and tested PC boards installed in the owner's cabinet or connected to switches, jacks, or cables, etc. sent to MFJ Enterprises, Inc. will be returned at the owner's expense unrepai red.
6. Under no circumstances is MFJ Enterprises, Inc. liable for consequential damages to person or property by the use of any MFJ products.
7. Out-of-Warranty Service: MFJ Enterprises, Inc. will repair any out-of-warranty product provided the unit is shipped prepaid. All repaired units will be shipped COD to the owner. Repair charges will be added to the COD fee unless other arrangements are made.
8. This warranty is given in lieu of any other warranty expressed or implied.
9. MFJ Enterprises, Inc. reserves the right to make changes or improvements in design or manufacture without incurring any obligation to install such changes upon any of the products previously manufactured.
10. All MFJ products to be serviced in-warranty or out-of-warranty should be addressed to:

**MFJ Enterprises, Inc.
300 Industrial Park Road
Starkville, Mississippi 39759 USA**

and must be accompanied by a letter describing the problem in detail along with a copy of your dated proof-of-purchase.

11. This warranty gives you specific rights, and you may also have other rights which vary from state to state.

